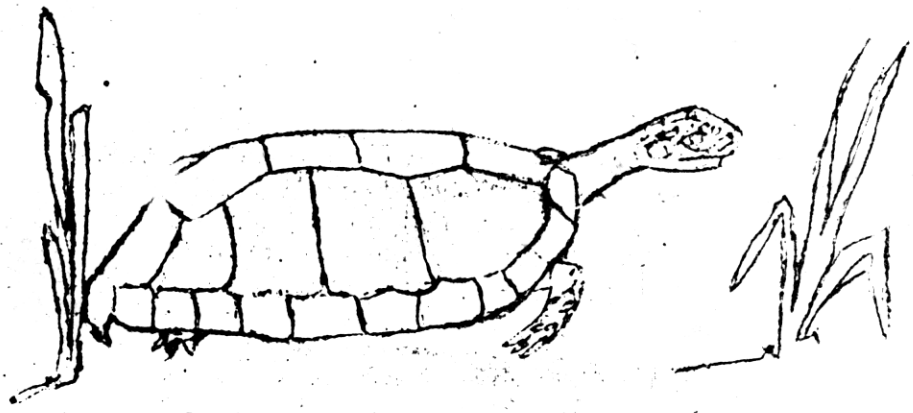

THE TRAVANCORE TORTOISE, Geochelone travancorica

This is the list in a series of notes which will eventually describe all of India's turtles and tortoises combining standard references and our latest findings.

One of the four tortoises found in India, the Travancore tortoise, Geochelone travancorica ranges along the western ghats in semi evergreen and evergreen forests at altitudes of 300m nad above within Kerala State.

Relatively common within its range, it is relished for its flesh by tribals who also sell them at small town markets. It is also a much favoured pet in many tribal homes where the tortoises are tied to pillars by boring a hole into the marginals.

The travancore tortoise is brown overall with black blotches on the carapace scutes; there a black blotch on each of the abdominal scutes on the plastron. The nuchal shield is usually absent.

This tortoise is thought to be closely related to the yellow tortoise Geochelone elongata which ranges in north India in Orissa, Madhya Pradesh, Uttar Pradesh, Bengal to Burma, Malaya and Thailand inhabiting dry deciduous and semi evergreen forests.

Geochelone elongata however differs from Geochelone travancorica in having its interhumeral seam longer than inter-pectoral seam, presence of nuchal shield and the presence of a elongated body form. The shell of a mature Geochelone elongata is much lighter being colored almost yellow.

Recently a Travancore tortoise carapace measuring 309mm was collected from tribals in the Chalakudy forests, Kerala by the MSPT which seems to be the longest recorded carapace length for this species (Vijaya, 1982).

They have marked sexually dimorphic characters as in most terrestrial chelonians. Males have a depressed carapace and a concave plastron. The anal notch diverges from the femoro-anal suture giving the tail a better access to curve down to reach the female during copulation. Tail is thick and elongated with a pointed tip; cloaca is placed closer to the tail end. The gular scutes are modified in the front with rounded edges.

The females have a deeper carapace with the dome being more pronounced. The plastron is flat without convacity. The tail in the female is short and blunt tipped. The pygal is not curved down as in the male but shorter and straignter enabling the tail of the male to curve under it during copulation. In the forests the tortoises are found in different habitats ; at altitudes of over 300m. They have been found in thick reed bamboo groves, frequented by elephants on steep hill sides; in the cool wet forests of the much higher altitudes and from grassy knolls.

Generally these tortoises are active in the mornings and cool evenings when they feed. In the rainy season they are more active, cropping away the edible mushrooms and tender bamboo shoots sprouting from the ground. The tortoises also feed on fallen fruits like wild jack fruits Artocarpus heterophyllus, Dillenia pentagyna, jungle pears and fallen flowers.

At noon time Travancore tortoises have been seen basking in shafts of sunlight in protected areas in the forests. They are often easy to find in thick beds of fallen debris because of their characteristic manner of tunneling their way through the debris leaving a more or less circular track of open ground behind until they get fully buried under the heap. The tribals often find them by these tracks.

Auffenberg (1964) observed the breeding color changes in this tortoise when the males attain a pink coloration around the nostrils and eyes.

Courting was observed in captivity at the Snake Park. A male was introduced into an enclosure with 2 females. Initially unreactive, he soon began to take interest in both of them. The male would follow a female around the enclosure, often ramming her with his shell and sniffing in the cloacal region. The ramming is done in a spurt of action using the front of the plastron in 3 or 4 successive hits on the shell of the female. Between two such raming bouts the male would extend its head fully, moving it with a characteristic nod while prodding its snout at any exposed soft part of the female such as the leg, tail or head.

The ramming behaviour has also been noticed among females which knock at walls and obstacles in their way while moving. It is assumed that they probably do this to dislodge rocks either to get access under, to move freely or in feeding. During mating the flared edge along the marginals on the posterior part seem to help a mounting male which firmly plants its hind legs on these edges. Neck is fully stretched and curved down, mouth is open and males emit a harsh throat clearing sound (the sound resembles this closest, but is less loud) with gaps of 20 seconds. The only v al display by the female was a hissing sound as she tried to dislodge the male.

A single egg measuring 54mm in length, 40.5mm in width and 58.5g in weight was laid in the open on 4th March 1983. This proved to be infertile. Measurements of hatchling Geochelone travancorica are not available in literature. A juvenile, presumably a hatchling, Travancore tortoise found on 31st December 1982 in the Chalakudy forest measured as follows:

Carapace length	- 60 mm
Carapace width	- 54 mm
Plastron length	- 52 mm
Shell height	- 28 mm
Weight	- 37 gms.

In captivity these tortoises accept a vegetable and fruit diet and will also feed on pieces of beef.

References:

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OBSERVATIONS ON THE NESTING BEHAVIOUR OF THE GANGES ROOFED TURTLE Kachuga dhongoka IN THE NATIONAL CHAMBAL SANCTUARY, UTTAR PRADESH

While monitoring nesting female gharial (Gavialis gangeticus) I had the opportunity of watching a female Kachuga dhongoka nesting 2 metres away. She was in the act of digging the nest cavity using her forelimbs. At intervals the female would insert her head in the nest cavity, straightening her hind legs to reach deeper into the cavity. The entire nest digging was done mainly by the forelimbs.

Egg laying: After nest digging was completed the female paused and seemed to survey her surroundings. She then turned and positioned her cloaca over the nest cavity. At intervals during egg laying she inserted her hindlegs into the nest cavity possibly to push the eggs deeper into the nest. The female then pushed sand into the nest with her hind legs until the nest was completely covered. It took the turtle about 23 minutes to deposit the eggs. 'Sal' - (Kachuga kachuga) nests were also seen on the same beach. I collected 2 K. kachuga and 3 K. dhongoka nests to hatch them in controlled conditions. The eggs of Kachuga kachuga are larger than dhongoka eggs and the distance of the nest from water is greater in Kachuga kachuga compared to the 'dhona', K. dhongoka nest temperatures recorded on 2 occasions in Mid May were 32°C in the morning; the same as Gavialis gangeticus and Crocodylus palustris nests in the area.

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